December 8, 2000

MEMORANDUM

TO: Orville Green, Administrator
Air Quality Programs
State Office

FROM: Ken Hanna, Air Quality Engineer
Process Engineering Group
Technical Services Division

THROUGH: Daniel P. Salgado, Lead Process Engineer
Process Engineering Group
Technical Services Division

SUBJECT: P-9506-075-1, ***Technical Analysis for Tier I Operating Permit No. 001-00026***
Chevron Pipeline Company and Northwest Terminalling Company, Boise, Idaho

Permittee:	Chevron Pipeline Company and Northwest Terminalling Company
PERMIT NO:	001-00026
STANDARD INDUSTRIAL CLASSIFICATION (SIC):	Chevron Pipeline Company: 4613 Northwest Terminalling Company: 5171
DESCRIPTION:	Pipeline Breakout Station / Petroleum Bulk Marketing Terminal
KINDS OF PRODUCTS:	Refined Petroleum Products: Gasoline, Diesel Fuel, Jet Fuel, etc.
RESPONSIBLE OFFICIAL:	Gerald A. McKee, Western Profit Center Manager
FACILITY CONTACT:	Jim Robbins, Environmental Specialist
TELEPHONE NO.:	(801) 539-7586 (FAX: 539-7555)
FACILITY CLASSIFICATION:	A
COUNTY:	Ada
AIR QUALITY CONTROL REGION:	064
UTM COORDINATES:	560.5, 4828.3

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LIST OF ACRONYMS AND ABBREVIATIONS

ACFM	Actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AP-42	USEPA Compilation of Air Pollution Emission Factors
AQCR	Air Quality Control Region
ASTM	American Society of Testing and Materials
bbl	Barrels (equals 42 gallons)
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CPL	Chevron Pipeline Company
DEQ	Idaho Department of Environmental Quality
dscf	Dry Standard Cubic Feet
dscfm	Dry Standard Cubic Feet per Minute
EF	Emission Factor
EPA	United States Environmental Protection Agency
EU	Emission Unit
gpm	gallons per minute
gr	Grain (1 pound = 7000 grains)
HAPs	Hazardous Air Pollutants
IDAPA	Idaho Administrative Procedures Act
km	Kilometer
lb(s)/hr	Pound(s) per hour
MMBTU	Million British Thermal Units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	Nitrogen Dioxide
NO	Nitrogen Oxides
NSPS	New Source Performance Standards
NWTC	Northwest Terminalling Company
O_3	Ozone
OP	Operating Permit
PAE	Potential Annual Emissions
PM	Particulate Matter
PM_{10}	Particulate Matter with a mean aerodynamic diameter of 10 micrometers (μm) or less
ppm	Parts per million
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
Rules	IDAPA 58.01.01.et. al. (Rules for the Control of Air Pollution in Idaho)
SCC	Source Classification Code
SIC	Standard Industrial Classification
SIP	State Implementation Plan
scf	standard cubic foot
SO_2	Sulfur Dioxide
TSP	Total Suspended Particulates
TVPOP	Title V Pilot Operating Permit Project
T/yr	Tons per year (1 Ton = 2000 lbs)
μm	Micrometers
VE	Visible Emissions
VES	Vapor Extraction System
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquid

1. PURPOSE

The purpose of this memorandum is to set out the legal and factual basis for this Final Tier I Operating Permit (OP) terms and conditions and to satisfy the requirements of IDAPA 58.01.01.300 through 387 (Rules for the Control of Air Pollution in Idaho) (Rules) for issuing Operating Permits.

Idaho Department of Environmental Quality (DEQ) staff members have reviewed the information provided by the Chevron Pipeline Company and the Northwest Terminalling Company (CPL & NWTC) regarding the operation of their facility in Boise, Idaho. This information was submitted, based on the requirements of the Tier I OP in accordance with Section 58.01.01.300 of the (Rules).

Based on the information submitted, the DEQ drafted a Tier I OP for CPL & NWTC. A notice was issued for public comments on the draft permit from August 10 through September 11, 2000. A public hearing was not requested, therefore, one was not held. After public comment, a proposed permit was developed, including consideration of comments received, and was forwarded to the United States Environmental Protection Agency (EPA) for their review on October 25, 2000 in accordance with IDAPA 58.01.01.366 (Rules).

2. SUMMARY OF EVENTS

On June 19, 1995, the DEQ received a Tier I OP application from CPL & NWTC. On August 14, 1995, September 4, 1997, October 7, 1998, and November 25, 1998, the DEQ received updates to the Tier I application. On December 4, 1998, DEQ declared the Tier I OP application administratively complete. From August 10 through September 11, 2000, a public comment period was held. Comments were received from Chevron Pipeline and Northwest Terminalling Companies, the Idaho Association of Commerce and Industry(IACI), and from Micron Technology, Inc. Changes to the Tier I OP resulting from these comments have been addressed in DEQ's Response to Comments document, the final Tier I operating permit, and in this Technical Memorandum. Those changes were also included into a proposed permit and technical memorandum which were submitted to the EPA for a forty-five (45) day review period from October 25 through December 9, 2000. No comments were received from EPA regarding the proposed permit.

3. BASIS OF THE ANALYSIS

The following documents were relied upon in preparing this memorandum and the Tier I OP:

(1) Tier I Air Permit Application, dated June 12, 1995 and received June 19, 1995, CPL & NWTC.

(2) Tier I Permit Application Update, dated August 14, 1995 and received August 14, 1995, CPL & NWTC.

(3) Tier I Permit Application Update dated September 2, 1997, received September 4, 1997, CPL & NWTC.

(4) Tier I Air Permit Application Update, dated October 6, 1998, received October 7, 1998, CPL & NWTC.

(5) Tier I Permit Application Update, dated November 19 and received November 25, 1998, CPL & NWTC.

(6) Permit to Construct an Air Pollution Emitting Source, Bioventing Well System and Vapor Incinerator, issued by DEQ to CPL on August 28, 1990.

(7) Permit to Construct an Air Pollution Emitting Source, Hydrocarbon Vapor Elimination System, issued by DEQ to CPL on April 29, 1983 (note: operation of this source was ceased in 1990).

(8) Compilation of Air Pollutant Emission Factors, AP-42, Office of Air Quality Planning and Standards, United States Environmental Protection Agency.

(9) Comments received from Chevron Pipeline Company dated September 6, 2000, Idaho Association of Commerce and Industry (IACI) on September 6, 2000, and from Micron Technology, Inc. dated September 11, 2000.

4.1 Facility Description

4.1.1 General Process Description

Refined petroleum products, including gasoline, diesel, and jet fuel, are transported to the Boise terminal via an underground pipeline system owned by CPL. In addition to Chevron products, several other oil companies transport their refined petroleum products through this pipeline as well. When a product reaches the Boise station, it is either transferred into marketing terminal storage tanks owned by NWTC, transferred to other operating terminals, or transferred into pipeline breakout storage tanks owned by CPL. The tanks and the truck loading rack are the facility's primary sources of emissions. The total tank storage capacity is approximately 510,000 barrels, and the truck rack's annual potential throughput is 885,008,000 gallons.

Fuel stored in the marketing terminal tanks is distributed into tanker trucks at the truck loading rack. The truck loading rack, which began operation in March 1994, is equipped with a state-of-the-art vapor containment and destruction system. Fuel stored in CPL's pipeline breakout tanks is either transferred back into the pipeline system and shipped north to Washington, transferred to NWTC's storage tanks or transferred to the operating terminals in Boise.

Swing Tanks. While many tanks at both CPL and NWTC are dedicated to contain only one product, several tanks may contain different products depending on the immediate storage needs. These tanks are known as swing tanks and have been so designated on the appropriate Title V application pages and emissions calculations tables. To simplify the calculations, emissions from all swing tanks are based on the assumption that these tanks contain gasoline and diesel all year. This will assure conservative emission estimates.

Additive Tanks. The various petroleum companies that store petroleum products at the Boise terminal have different fuel additives that are added to the products at the time of truck loading. These additives are stored in dedicated tanks, near the truck loading rack. The composition of these additives is known only to the extent the information is provided in the Material Safety Data Sheets. This information has been used to calculate the potential emissions from these storage tanks. However, fuel additives and their composition change from time to time. Rather than request a permit modification each time an additive is replaced or modified, any changes in additives that will affect emissions will be identified on the yearly emissions inventory. The change in emissions from these sources is not expected to be significant.

CPL Emission Sources. Emission sources at the Boise Terminal can be attributed to CPL, NWTC, or both. CPL emission sources include a vapor extraction system, 10 aboveground fixed roof tanks (# 9, 14, 162, 163, 201, 400, 401, 402, 403, 404), 10 external floating roof tanks (# 164, 165, 166, 200, 202, 203, 204, 205, 206, 207), and fugitive emissions from valves, flanges, compressor seals, etc., associated with all those sources and the pipeline.

The storage tanks vary in size from 1000 barrels (bbls) to 65,774 bbls (one barrel equals 42 U.S. gallons). As part of a voluntary remediation project, a vapor extraction system (VES) was installed on-site at CPL in 1990 to remove hydrocarbons from under the plant site. The VES has two blowers that can deliver up to 1,000 scfm of hydrocarbon contaminated air to the intake of a vapor incinerator for flaring. Flaring is a high temperature oxidation process used to burn combustible components of waste gases. The incinerator is supplemented with natural gas and/or ambient air as needed to regulate the operating temperature and achieve optimal operating efficiency. Emissions from the VES consist of volatile organic compounds (VOC) from extracted vapors that they do not incinerate (control efficiency is 95%), and pollutants of combustion generated from the incineration process, and VOCs when authorization is given to bypass the incinerator due to low concentrations in the airstream. A similar VES system was installed nearby on Norwood Street in 1983.

NWTC Emission Sources. Emissions sources at NWTC include the vapor destruction system for the truck loading rack, 13 aboveground fixed roof storage tanks (# 1, 2, 3, 6, 7, 167) of which 7 are additive tanks(# A201, A202, A203, A204, A205, A206, A207), 4 external floating roof storage tanks (12, 13, 208, 209) and 3 internal floating roof tanks(#4, 5, 8), the truck loading rack, and the fugitive emission associated with all those sources. The storage tanks vary in size from 71 bbls to 22,046 bbls (one barrel equals 42 U.S. gallons). At the truck loading rack, generally loading losses are the primary source of evaporative emissions. The losses occur as organic vapors in "empty" cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. The truck loading rack at NWTC is a bottom fill loading rack with a vapor containment and destruction system. The vapor destruction system is a thermal oxidizer supplemented with natural gas and/or ambient air as needed, and it has a manufacturer's guaranteed maximum of 35 mg of VOC emitted per liter of gasoline loaded.

4.1.2 Facility Classification

The facility is major (IDAPA 58.01.01.008.10.c) based on VOC emissions. It is classified as an A1 source on the basis that potential VOC emissions are 221 tons/year at CPL and 146 tons/year at NWTC. The facility is a designated facility as defined in IDAPA 58.01.01.006.27 since the petroleum storage and transfer capacity exceeds 300,000 barrels.

4.1.3 Area Classification

The CPL and NWTC facility is in Boise, Idaho, Ada County, and Zone 11. The air quality control region (AQCR) is 64.

4.1.4 Permitting History

Based on the review of the contents of the source file for the CPL & NWTC Boise facility, the following chronological history has been established for the facility's permitting history.

CPL submitted a Permit to Construct (PTC) application for a voluntary off-site hydrocarbon vapor elimination system for soil vapor remediation on Norwood Street on March 14, 1983.

DEQ issued a PTC for the hydrocarbon vapor elimination system on April 29, 1983.
On March 26, 1990, CPL submitted a PTC application for a hydrocarbon vapor elimination system on-site.

On April 26, 1990, DEQ requested additional information to supplement the PTC application.

CPL submitted additional information to DEQ for the PTC application on May 29, 1990.
CPL provided a copy of the manufacturer's guarantee of 95% destruction efficiency for the vapor combustor on August 28, 1990.

On August 28, 1990, DEQ issued PTC # 0020-0026 for the on-site hydrocarbon vapor elimination system.

CPL submitted a Tier I Operating Permit (OP) application on June 12, 1995.
CPL submitted a Tier I OP application update on August 14, 1995.

On December 13, 1996, NWTC notified the EPA Region 10 that the facility is a major source under the provisions of the NESHAPs for Source Categories, Gasoline Distribution (Stage 1).

DEQ responded to CPL's March 8, 1995 request for an emission reduction credit determination. DEQ indicated that the requested credits could not be granted on the basis that emission reductions imposed by local, state, or federal regulations or permits shall not be allowed for emission reduction credits (IDAPA 58.01.01.460.05).

On June 16, 1997, CPL provided revised emission inventories that demonstrate the facility is not a major source of HAPs and is therefore not subject to any MACT standards.

CPL submitted a Tier I OP application update on September 2, 1997.

On September 8, 1997, CPL notified EPA Region X that the facility is not a major source under the provisions of the NESHAPs for Source Categories, Gasoline Distribution - Stage 1 (40 CFR Part 63, Subpart R), contrary to what was stated in the NWTC letter of December 13, 1996. They made the change in response to a DEQ request that the HAP emission calculations be reevaluated for this facility. Total annual HAP emissions are less than 25 tons and each individual HAP emission is less than 10 tons.

On July 31, 1998, DEQ requested the facility to update the Tier I operating permit (OP) application as necessary to reflect newly revised IDAPA rules and the new final rule for Compliance Assurance Monitoring (CAM).

CPL requested a 30-day extension for submittal of a revised Tier I OP application on September 1, 1998.

DEQ granted the 30-day extension on September 11, 1998.

CPL submitted a Tier I OP application update dated October 6, 1998.

CPL submitted a Tier I OP application update dated November 19, 1998.
On December 4, 1998, DEQ declared the Tier I OP application administratively complete.

On September 14, 1999, DEQ notified NWTC that the DEQ is now expediting the issuance of Tier I operating permits.

On August 7, 2000, DEQ issued a Notice to all parties interested that a 30-day comment period of the Draft Tier I Operating Permit would be held from August 10 through September 11, 2000.

CPL submitted comments dated September 6, 2000 on the Draft Tier I Operating Permit.

IACI submitted comments dated September 6, 2000 on the Draft Tier I Operating Permit.

Micron Technology, Inc. submitted comments dated September 11, 2000 on the Draft Tier 1 Operating Permit.

DEQ Response to Comments on the Draft Tier I Operating Permit dated October 20, 2000.

4.2 Facility-Wide Applicable Requirements

4.2.1 Fugitive Particulate Matter - IDAPA 58.01.01.650-651

4.2.1 (a) Requirement

Facility-Wide Condition A.1 states that, all reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650-651.

4.2.1 (b) Compliance Demonstration

Facility-wide Condition A.2 states that the permittee is required to monitor and record the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include, use of water or chemicals, application of dust suppressants, use of control

equipment, covering of trucks, paving of roads or parking areas, and removal of materials from streets.

Facility-wide Condition A.3 requires that the permittee maintain records of all fugitive dust complaints received. In addition the permittee is required to take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The permittee is also required to maintain records which shall include the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken and the date the corrective action was taken.

To ensure that the methods being used by the permittee to reasonably control fugitive particulate matter emissions whether or not a complaint is received, facility-wide condition A.4 requires that the permittee conduct periodic inspections of the facility. The permittee is required to inspect potential sources of fugitive emissions during daylight hours and under normal operating conditions. If the permittee determines that the fugitive emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee is also required to maintain records of the results of each fugitive emission inspection.

Both Facility-wide Conditions A.3 and A.4 require the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid complaint or determining that fugitive particulate emissions are not being reasonably controlled meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.2 Control of Odors - IDAPA 58.01.01.775-776

4.2.2 (a) Requirement

Facility-wide Condition A.5 and IDAPA 58.01.01.776 both state that: *"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids to the atmosphere in such quantities as to cause air pollution."* This condition is currently considered federally enforceable until such time it is removed from the SIP, at which time it will be a state-only enforceable requirement.

4.2.2 (b) Compliance Demonstration

Facility-wide Condition A.6 requires the permittee to maintain records of all odor complaints received. If the complaint has merit, the permittee is required to take appropriate corrective action as expeditiously as practicable. The record is required to contain the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Facility-wide Condition A.6 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid odor complaint meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.3 Visible Emissions - IDAPA 58.01.01.625

4.2.3 (a) Requirement

IDAPA 58.01.01.625 and Facility-wide Condition A.7 state that *"(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined . . ."* by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this rule.

4.2.3 (b) Compliance Demonstration

To ensure reasonable compliance with the visible emission rule, Facility-wide Condition A.8 requires that the permittee conduct routine visible emissions inspections of the facility. The permittee is required to inspect potential sources of visible emissions, during daylight hours and under normal operating conditions. If any visible emissions are present from any point of emission covered by this section, the permittee must take appropriate corrective action as expeditiously as practicable. If opacity is determined to be greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period, the permittee must take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA 58.01.01.130-136. The permittee is also required to maintain records of the results of each visible emissions inspection which must include the date of each inspection and a description of the permittee's assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

It should be noted that if a specific emission unit has a specific compliance demonstration method for visible emissions that differs from Facility-wide Condition A.8, then the specific compliance demonstration method overrides the requirement of Condition A.8. Condition A.8 is intended for small sources that would generally not have any visible emissions.

Facility-wide Condition A.8 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of discovering visible emissions meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.4 Startup, Shutdown, Scheduled Maintenance, Safety Measures, Upset and Breakdown- IDAPA 58.01.01.130-136

4.2.4 (a) Requirement

Facility-wide Condition A.9 requires that the permittee comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upset and breakdowns. This section is fairly self explanatory and no additional detail is necessary in this technical analysis. It should, however, be noted that subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the permit as applicable requirements. These provisions of the *Rules* only apply if the Permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow the

Department to determine if an enforcement action to impose penalties is warranted. Section 131.01 states *". . . The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05."* Failure to prepare or file procedures pursuant to Sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the Permittee has the option to follow the procedures in Subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.

4.2.4 (b) Compliance Demonstration

The compliance demonstration is contained within the text of facility-wide condition A.9. No further clarification is necessary here.

4.2.5 Chemical Accident Prevention Provisions - 40 CFR Part 68

4.2.5 (a) Requirement

Any facility that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115 must comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR Part 68 no later than the latest of the following dates:

Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130; or

The date on which a regulated substance is first present above a threshold quantity in a process.

This facility is not currently subject to the requirements of 40 CFR Part 68. However, should the facility ever become subject to the requirements of 40 CFR Part 68 then it must comply with the provisions contained in 40 CFR Part 68 by the time listed above. See Section 4.9 of this memorandum, Non-Applicable Requirements, for additional information.

4.2.6 Distillate Fuel Sulfur Content - IDAPA 58.01.01.725-728

Sulfur content in fuels is limited by regulation as a method of reducing sulfur dioxide (SO_2) emissions due to combustion of the fuel in internal combustion engines.

4.2.6 (a) Applicable Requirement

IDAPA 58.01.01.725 - 728 regulates the sulfur content of fuels distributed and used in Idaho. The text of the regulations follows:

IDAPA 58.01.01.725 - 728:

725. RULES FOR SULFUR CONTENT OF FUELS.

The purpose of Sections 725 through 729 is to prevent excessive ground level concentrations of sulfur dioxide from fuel burning sources in Idaho. The reference test method for measuring fuel sulfur content shall be ASTM method, D129-95 Standard Test for Sulfur in Petroleum Products (General Bomb Method) or such comparable and

equivalent method approved in accordance with Subsection 157.02.d. Test methods and procedures shall comply with Section 157. (4-23-99)T

726. DEFINITIONS AS USED IN SECTIONS 727 THROUGH 729.

01. ASTM. American Society for Testing and Materials.

02. Distillate Fuel Oil. Any oil meeting the specifications of ASTM Grade 1 or Grade 2 fuel oils.

03. Residual Fuel Oil. Any oil meeting the specifications of ASTM Grade 4, Grade 5 and Grade 6 fuel oils.

727. RESIDUAL FUEL OILS.

01. Standards for 1973. After January, 1973, no person shall sell, distribute, use or make available for use, any residual fuel oil containing more than two and one-half percent (2.5%) sulfur by weight.

02. Standards Beginning 1974. After January, 1974, no person shall sell, distribute, use or make available for use, any residual fuel oil containing more than one and three-fourths percent (1.75%) sulfur by weight.

728. DISTILLATE FUEL OIL.

No person shall sell, distribute, use or make available for use, any distillate fuel oil containing more than the following percentages of sulfur:

01. ASTM Grade 1. ASTM Grade 1 fuel oil - 0.3 percent by weight

02. ASTM Grade 2. ASTM Grade 2 fuel oil - 0.5 percent by weight

The Tier I OP application did not reflect distribution of residual fuel oils, consequently the permit does not reflect any applicable requirement or compliance demonstration requirements for IDAPA 58.01.01.727, which addresses the distribution of fuels.

The permit does not specifically include the definitions listed in the regulation. The limitations are specified in IDAPA 58.01.01.728, and they are included in the Tier I OP as permit condition A.18, in the section titled "Facility-Wide Conditions."

4.2.6 (b) Compliance Determination

The permit specifies two options for establishing compliance with the sulfur limitation for each tank at the facility which contains distillate fuel oil. The options include either monthly testing to determine fuel sulfur content or less frequent semiannual testing plus documentation of sulfur content from the refineries which produce the fuels. These options are included in conditions A.19.1 and A.19.2 as follows:

A.19.1
The permittee shall determine the sulfur content in each distillate fuel storage tank on a monthly basis by testing as specified in condition A.19; or

A.19.2
The permittee shall obtain documentation of the distillate fuel oil sulfur content from the refinery or refineries that produce(s) the fuel. Acceptable documentation shall include current contractual agreements which specify that the sulfur contents of distillate fuel oils entering the pipeline from the refinery are within the limits specified in this permit. In addition, the permittee shall determine the sulfur content in each distillate fuel storage tank on a semiannual basis by testing as specified in condition A.19. Testing documentation shall identify the tank number and the ASTM Grade of the fuel stored in the tank at the time of testing.

4.2.6 (c) Emission Limits and Standards Authority

The authority for the fuel sulfur content limitations and testing requirements is IDAPA 58.01.01.725, 726.01, 726.02, and 728. The date of effectiveness for these regulations is April 23, 1999 for IDAPA 58.01.01.725, and May 1, 1994 for each of the other regulations cited above.

4.2.6 (d) Monitoring Requirements

They require that the permittee periodically test the distillate fuel oil maintained in tanks at the facility to determine the fuel sulfur content.

4.2.6 (e) Testing Requirements

For all fuel sulfur content testing of distillate fuel oils at the facility, the permittee must either utilize the test method for sulfur content specified by IDAPA 58.01.01.725 or an alternative method approved by DEQ through the methods specified in IDAPA 58.01.01.157 which addresses test methods and procedures. Specific testing requirements are included in condition A.19 which states:

A.19
The permittee shall establish compliance with the limits specified in Condition A.18 by fulfilling either condition A.19.1 or condition A.19.2. Testing and/or certification shall be conducted for the appropriate fuel material and time period specified by this permit condition. The reference test method for measuring fuel sulfur content shall be ASTM method, D129-95 Standard Test for Sulfur in Petroleum Products (General Bomb Method) or such comparable and equivalent method approved in accordance with IDAPA 58.01.01.157.02.d. Test methods and procedures shall comply with IDAPA 58.01.01.157. The permittee may distribute distillate fuels from any of the storage tanks prior to, during, and after the sampling event.

4.2.6 (f) Recordkeeping Requirements

The permittee is required to keep the results of the monthy or semiannual sampling and testing events in records if they choose to perform their own sulfur content testing. If the Permittee chooses to demonstrate compliance by utilizing permit condition A.19.2, the contractual documentation with each refinery providing distillate fuel must be kept on site.

4.2.6 (g) Reporting Requirements

The Permittee must submit certified semiannual reports of all required monitoring listed above in Section 4.2.6(d). Documentation from the refinery(ies) must also be provided in the semiannual report.. Deviations are to be noted by the Permittee and the corrective action(s) taken must be included in the semiannual report.

All monitoring records and support information must be retained for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application.

4.2.7 NSPS Subpart A Applicability

4.2.7 (a) Requirements

The affected facility subject to 40 CFR 60 Subpart XX (NSPS) is the total of all loading racks at the bulk gasoline terminal which deliver liquid product into gasoline tank trucks, the construction or modification of which is commenced after December 17, 1980 (see 40 CFR 60.500). Therefore the facility must also comply with applicable sections of Subpart A (NSPS General Provisions). After reviewing the general provisions it was determined that only the following sections applied to this facility:

60.4	Address;
60.7{(a)(4), &(b)}	Notification and Recordkeeping;
60.8(b)(c)(d)(e)	Performance Tests;
60.11(b)(c)(d)(g)	Standards and Maintenance;
60.12	Circumvention;
60.14	Modification; and
60.15	Reconstruction.

4.2.7 (b) Compliance Demonstration

Most of these requirements are to show compliance. Each requirement is taken directly out of Subpart A and is included as text in the facility-wide conditions. No further clarification is necessary here.

4.2.7 (c) Non-Applicable Requirements

60.1, 2, 3, 5, 6, 9, 10, 16, and 17 are not requirements that need to be included in the Title V permit. However there were several other sections that the applicability to this facility had to be determined, as follows.

60.7(a)(1-3, 6) were not placed into this permit because they address notification of initial startup of a facility and the bulk gasoline terminal loading rack at this facility has been operating since March, 1994.

60.7(a)(5,7) do not apply to this facility because this facility is not required to utilize a continuous opacity monitoring system.

60.7(c), (d), (e), and (f) do not apply to this facility because this facility does not utilize a continuous monitoring system. All of these requirements pertain to facilities that have continuous monitoring systems of any kind.

60.7(g) and (h) are simply informational sections and were not included in the Title V permit.

60.8(a) was not placed into this permit because it addresses notification of initial startup of a facility and the bulk gasoline terminal loading rack at this facility has been operating since March, 1994.

60.8(f) does not apply as specified in 60 503(a).

60.11(a) was not placed in the permit because compliance with the standards in 40 CFR Part 60 for this facility are addressed by 60.503.

60.11(e) does not apply because it refers to the initial compliance test, and the bulk gasoline terminal loading rack at this facility has been operating since March, 1994.

60.11(f) does not apply to this facility.

60.13 does not apply because this facility does not utilize any continuous monitoring systems.

60.18 does not apply as this facility does not have any control devices as described in the section (i.e. flare).

4.3 Hazardous Air Pollutants (HAPs) and VOCs

HAPs and VOCs are present in the various petroleum products received, stored, and transferred at the facility. HAPs and VOCs are emitted due to the volatilization of the liquid constituents while the products are stored in tanks, transferred through piping, and loaded into carrier tanks (tanker trucks). Some additional HAP and VOC emissions are from the CPL vapor extraction systems and the NWTC loading rack vapor destruction system (insignificant activities are not included). Detailed emission estimates from the facility are provided in Tables 1-1 through 1-5 of the Tier I permit application, and a summary is presented in Table 1 below.

The number in parentheses next to each HAP is the Chemical Abstracts Service (CAS) registry number for that HAP. This number is unique for each chemical and allows efficient searching for information on computerized databases.

HAP and VOC emissions are mainly a result of gasoline service. Gasoline has a significantly higher HAPs content in both species and amount in comparison to distillate fuel oils (such as Diesel Fuel #1, #2, etc.). The volatility of gasoline far exceeds that of distillate fuel oils, and thus the actual and potential air emissions are orders of magnitude larger for gasoline products. Total HAPs emissions are less than 10 tons/year of any single HAP and less than 25 tons/year of any combination of HAPs, so the facility is not a major source of HAPs as defined by IDAPA 58.01.01.008.10. Total VOC emissions are greater than 100 tons/year, so the facility is a major source of VOC/ozone as defined by IDAPA 58.01.01.006.55.

TABLE 1. FACILITY-WIDE HAP and VOC EMISSIONS

POLLUTANT	CPL POTENTIAL EMISSIONS (tons/year)	NWTC POTENTIAL EMISSIONS (tons/year)
Total VOCs	220.8	145.7
Total HAPs	8.41	6.52
Individual HAPs:		
Benzene (71-43-2)	1.57	1.04
Cumene (98-82-8)	0.012	0.014
Ethylbenzene (100-41-4)	0.17	0.12
Hexane (110-54-3)	2.89	2.21
MTBE (1634-04-4)	0.32	0.42
Naphthalene (91-20-3)	0.011	0.008
Phenol (108-95-2)	0.013	0.01
Toluene (108-88-3)	2.46	1.90

POLLUTANT	CPL POTENTIAL EMISSIONS (tons/year)	NWTC POTENTIAL EMISSIONS (tons/year)
Xylenes (1330-20-7)	0.95	0.78

4.4 Criteria Air Pollutants

The facility's emissions of oxides of nitrogen and sulfur (NOx and SOx) and carbon monoxide (CO) originate from the CPL Vapor Extraction System (VES) incineration processes and from the NWTC Truck Loading Rack Vapor Destruction Process thermal oxidizer. Emission limits for the CPL VES are given in the August 28, 1990 Permit to Construct and included in Table 3-1 of the Tier I permit application. Potential annual emissions of fugitive road dust were also estimated for paved and unpaved roads on-site. Table 3-5 and pages 3-23 through 3-26 of the Tier I permit application provide detailed emission estimates from the facility, and a summary is presented in Table 2 below.

TABLE 2. TOTAL FACILITY CRITERIA AIR POLLUTANT EMISSIONS

POLLUTANT	POTENTIAL EMISSIONS (tons/year)
NOx	15.8
CO	29.5
SOx	< 1.0
PM-10 (Control Devices)	< 1.0
Total PM-10	18

4.5 Alternative Operating Scenarios

No alternative operating scenarios were proposed in the application.

4.6 Emissions Trading

No emissions trading scenario was requested in the permit application.

4.7 Excess Emissions

CPL and NWTC are required to follow the procedures in IDAPA 58.01.01.130-136 for excess emissions. The excess emissions requirements are provided in detail in Section A of the permit.

4.8 Affected States Notice and Review

A review of the site location information included in the permit application indicates that the facility is located approximately 40 miles from the border of the state of Oregon (straight line distance). The permit application listed a distance of 50 miles to the nearest state border. IDAPA 58.01.01.008.01, defines *affected states* as:

> "All States:
>
> a. Whose air quality may be affected by the emissions of the Tier I source and that are contiguous to Idaho; or
> b. That are within fifty (50) miles of the Tier I source."

Affected states are offered the opportunity to formally be notified and receive a copy of the public comment package as required by IDAPA 58.01.01.364.02. Therefore, Oregon was provided the

opportunity to comment on the draft Tier I OP .

4.9 Non-Applicable Requirements

Non-applicable requirements that are intended to qualify for protection under the general permit shield must meet each of the following requirements, as listed in IDAPA 58.01.01.325.01(b):

> IDAPA 58.01.01.325.01(b).
> Non-applicable requirements. For a requirement to be a non-applicable requirement, all of the following criteria must be met:
>
> i. Permittee must have provided the information required by Subsection 314.08.b. in the application.
>
> ii. The requirement must be specifically identified in the Tier I operating permit as a non-applicable requirement.
>
> iii. The requirement must have been determined by the Department, in writing and in acting on the permit application or revision, to not be applicable to the Tier I source.
>
> iv. Tier I operating permit must include the Department's determination or a concise summary thereof.

A summary of the most important regulatory requirements that have been reviewed by CPL and NWTC and determined not to apply to the emission units or the facility as a whole includes:

4.9.1 New Source Performance Standards - Subpart K, Ka (Storage Vessels for Petroleum Liquids) and Kb (Storage Vessels for Volatile Organic Liquids, Including Petroleum Liquids)

Applicability of Subparts are based on whether the emissions unit in question was constructed, modified, or reconstructed within the dates specified by the Standard of Performance.

Subpart	Construction, Reconstruction, or Modification Date
K	40,000 to 65,000 gallons capacity - March 8, 1974 to May 19, 1978; and > 65,000 gallons capacity - June 11, 1973 to May 19, 1978
Ka	> 40,000 gallons capacity - after May 18, 1978
Kb	> 40 cubic meters (10,567 gal) capacity - after July 23, 1984

CONSTRUCTION DATES AND SIZES OF CPL and NWTC TANKS

Tank ID #	Date of Construction, Reconstruction or Modification	Storage Capacity (Gallons)	Product Type Stored
9-CPL	1949	42,000	Transmix
14-CPL	1967	126,000	Transmix
162-CPL	1953	593,124	Jet Fuel

Tank ID #	Date of Construction, Reconstruction or Modification	Storage Capacity (Gallons)	Product Type Stored
163-CPL	1953	593,460	Diesel
164-CPL	1953	556,164	Gasoline/Diesel
165-CPL	1953	554,736	Gasoline
166-CPL	1953	541,968	Gasoline
200-CPL	1956	2,561,412	Gasoline
201-CPL	1956	2,762,508	Diesel
202-CPL	1956	1,629,936	Gasoline
203-CPL	1956	1,646,484	Gasoline/Diesel
204-CPL	1956	771,330	Gasoline/Diesel
205-CPL	1956	761,544	Gasoline/Diesel
206-CPL	1956	772,044	Gasoline/Diesel
207-CPL	1956	771,288	Gasoline/Diesel
400-CPL	prior to 1972	42,000	Transmix/Water
401-CPL	prior to 1972	84,000	Transmix/Water
402-CPL	prior to 1972	84,000	Transmix/Water
403-CPL	prior to 1972	168,000	Transmix/Water
404-CPL	prior to 1972	168,000	Transmix/Water
1-NWTC	1951	269,430	Jet Fuel
2-NWTC	1951	186,648	Jet Fuel
3-NWTC	1951	186,648	Jet Fuel
4-NWTC	1949	345,282	Diesel
5-NWTC	1949	493,164	Gasoline
6-NWTC	1949	455,280	Diesel
7-NWTC	1949	723,660	Diesel
8-NWTC	1949	323,148	Gasoline
12-NWTC	1956	590,520	Gasoline
13-NWTC	1956	589,134	Gasoline
167-NWTC	1953	126,000	Transmix
208-NWTC	1956	921,606	Gasoline
209-NWTC	1956	925,932	Gasoline
A201-NWTC	1994	14,700	Fuel Additive
A202-NWTC	1994	8000	Fuel Additive
A203-NWTC	1994	3000	Fuel Additive

Tank ID #	Date of Construction, Reconstruction or Modification	Storage Capacity (Gallons)	Product Type Stored
A204-NWTC	1994	8000	Fuel Additive
A205-NWTC	1995	600	Fuel Additive
A206-NWTC	1995	3000	Fuel Additive
A207-NWTC	1996	8000	Fuel Additive

In order for the NSPS Subparts to be non-applicable, the individual storage tanks must not have been initially constructed, undergone a *modification* as defined by 40 CFR 60.14, or *reconstruction* as defined by 40 CFR 60.15. Based upon the information provided in the permit application, as summarized in the table above, only one of the tanks at CPL and NWTC is subject to Subparts K, Ka, and Kb of 40 CFR Part 60 at this time. Subpart Kb applies to Tank A201 at NWTC as per 40 CFR 60.110b(a) (see Section 5.3 of this memo). If any of the tanks are modified or reconstructed, or if any new tanks are installed at a later time, then the applicability of Subparts K, Ka and Kb will need to be addressed at that time.

During the public comment period for the draft permit, CPL submitted the following comment regarding the "Storage Tanks" section of the permit: "Only one Kb tank is listed in the table. That tank is.Additive Tank A201. Issue: In June, as part of the EPA's "Storage Tank Emission Reduction Partnership Program", it was discovered through a search of old engineering files that, in the mid 1980's, due to safety concerns, slotted guide poles were installed on tanks 202, 203, 204, and 206. Suggested Correction: Add tanks 202, 203, 204, and 206 to the table on page # 23." Additional time is needed to determine applicability of 40 CFR Part 60, Subpart Kb for these four tanks. If it is later determined that Subpart Kb applies, then either a PTC or a Tier II Operating Permit will need to be issued to address the modification to the tanks and that permit needs to include all applicable sections of Subpart Kb. Following issuance of the PTC or Tier II permit, then the Tier I Operating Permit would need to be modified to include the new requirements.

4.9.2 CAA 112(r) Risk Management Plan

On January 6,1998, the EPA published the final rule for 40 CFR Part 68 - List of Regulated Substances and Thresholds for Accidental Release Prevention in the federal register. Gasoline has been exempted from the requirement of submitting a formal risk management plan. The summary of this action can be found on the EPA website (January 6, 1998, Volume 63, Number 3, pp 639-645, of the Federal Register) at the following site address:

http://www.epa.gov/fedrgstr/EPA-AIR/1998/January/Day-06/a267.htm

The risk management plan applicability threshold listed in 40 CFR 68.115(b) was modified to exempt flammable substances in gasoline used as fuel for internal combustion engines. Thus, if the substances are exempted from any applicability determination, it is not subject to the risk management plan reporting requirement.

5. REGULATORY ANALYSIS - EMISSION UNITS

5.1 Emission Unit - NWTC Truck Loading Rack Vapor Containment and Destruction System

5.1.1 Emission Unit Description

Fuel stored in the marketing terminal tanks is distributed into tanker trucks at the truck loading rack. Generally, loading losses are the primary source of evaporative emissions from tank truck operations. The losses occur as organic vapors in "empty" cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. The truck loading rack at NWTC is a bottom fill design that reduces air emissions during the carrier tank loading process

compared to top fill splash loading operations.

The truck loading rack, which began operation in March 1994, was equipped with a state-of-the-art vapor containment and destruction system. A thermal oxidizer is used for vapor destruction. It is a John Zink model ZTOF. For vapor destruction, the fuel vapor heat content is given as 1389 Btu/scf, the maximum hourly combustion rate is given as 23,112 scf/hr (32 MMBtu/hr), and the manufacturer's guaranteed destruction level is 35 mg of VOC emitted per liter of gasoline loaded. At the time of installation, it was determined that the installation of the new truck loading rack and vapor collection system was not a modification; a Permit to Construct from the State of Idaho was not required.

Emissions estimates were established using the permittee's requested throughputs of fuels. The potential VOC emissions from gasoline loading were calculated based on the manufacturer's guarantee of a maximum of 35 mg of VOC emitted per liter of gasoline loaded. Potential VOC emissions from loading diesel and jet fuel were calculated using AP-42 equations (Section 5.2) and assuming no controls, even though vapor destruction applies to these fuels as well. This is because emissions from these fuel types are relatively low in comparison to gasoline (i.e., less than 35 mg/l allowed). Emissions of HAPs were calculated using the average weight percent of each HAP in the liquid being loaded. Note that AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids, dated January 1995, indicates the error range for the calculation method used is ± 30%.

5.1.2 Permit Requirement - Standard for VOC Emissions from Bulk Gasoline Terminals [40 CFR 60.502(a), (b), and (d)]

5.1.2(a) Applicability

The affected facility to which the provisions of 40 CFR Part 60, Subpart XX, apply is the total of all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks. In addition the construction or modification of which must have commenced after December 17, 1980. The definition of a bulk gasoline terminal (40 CFR 60.501) includes requirements that the facility "...receives gasoline by pipeline and has a gasoline throughput greater than 75,700 liters per day." Since the NWPL truck loading rack was constructed in 1994 and the facility meets the bulk gasoline terminal definition requirements, then Subpart XX applies to the facility.

In accordance with 40 CFR 60.502(a), each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.

For the NWTC loading rack, 40 CFR 60.502(b) requires that the emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded.

For the NWTC loading rack, 40 CFR 60.502 (d) requires that each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.

5.1.2(b) Compliance Demonstration Method

Compliance with this standard shall be demonstrated by completing the monitoring, testing, recordkeeping, and reporting requirements stated in 5.1.2(c), (d), (e), and (f) of this memorandum.

5.1.2(c) Monitoring

Each calendar month, 40 CFR 60.502(j) requires that the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected

during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

5.1.2(d) Testing

Pursuant to 40 CFR 60.503(a), in conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in this section, except as provided in §60.8(b). The three-run requirement of §60.8(f) does not apply to 40 CFR, Part 60, Subpart XX.

Pursuant to 40 CFR 60.503(b), immediately before the performance test required to determine compliance with §60.502(b) and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.

The owner or operator shall determine compliance with the standards in §60.502(b) by performing the testing specified in §60.503(c).

5.1.2(e) Recordkeeping

The permittee must record the information listed in section 5.1.2(c), on a monthly basis. To comply with §60.505(c), a record of each monthly leak inspection required under §60.502(j) shall be kept on file at the terminal and include the following information:

- The date, place (e.g., truck loading rack) and time of sampling or measurements;
- Findings. Each detection of a leak shall be recorded. If no leaks are discovered, this should be recorded. For each leak that is discovered, record the location, nature, and severity of the leak;
- Leak determination method (e.g., the analytical techniques, equipment, or methods used);
- Corrective action. For each leak that is discovered, record the date the leak was repaired, and the reasons for any repair interval that exceeds 15 calendar days;
- The inspector's name, company affiliation, and signature; and
- The operating conditions existing at the time of sampling or measurement.

All monitoring records and support information must be retained for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application (IDAPA 58.01.01.322.07, 5/1/94).

5.1.2(f) Reporting

The Permittee must submit certified semiannual reports of all required monitoring listed above in Section 5.1.2(c). Deviations are to be noted by the permittee and the corrective action(s) taken must be included in the semiannual report. Refer to the General Provisions at the end of the Tier I Operating Permit.

5.1.3 Permit Requirement - Visible Emissions Standard - [IDAPA 58.01.01.625 (4-23-99)]

5.1.3(a) Applicability

The truck loading rack thermal oxidizer is subject to the visible emissions standard in accordance with IDAPA 58.01.01.625. Information and calculations presented in the permit application confirm that this control device is a nonsmoking thermal oxidizing flare. AP-42 industrial flare emission factor information indicates soot concentrations from this type device are negligible.

It does not appear that combustion of natural gas and captured fuel vapors in this particular device will cause a violation of the visible emissions standards. Therefore, compliance with the visible emissions standards will be demonstrated by requiring the exclusive use of natural gas and/or captured fuel vapors in the thermal oxidizer and by including this source in the required quarterly facility-wide inspections of all potential sources (see permit condition A.8).

5.1.4 Permit Requirement - Gasoline Tank Truck Loading Requirements [40 CFR 60.502(e), (f), and (g)]

5.1.4(a) Applicability

The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system. [40 CFR 60.502(f)]
The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks. [40 CFR 60.502(g)]

In accordance with 40 CFR 60.502(e), loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the procedures stated in 40 CFR 60.502(e)(1) through (6).

5.1.4(b) Compliance Demonstration Method

Compliance with this standard shall be demonstrated by completing the monitoring, testing, recordkeeping, and reporting requirements stated in 5.1.4(c), (d), (e), and (f) of this memorandum.

5.1.4(c) Monitoring

The owner or operator will obtain the vapor tightness documentation described in 40 CFR 60.505(b) for each gasoline tank truck that is to be loaded at the affected facility. [40 CFR 60.502(e)(1)]

The owner or operator shall cross check each tank identification number obtained in 40 CFR 60.502(e)(2) with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded. [40 CFR 60.502(e)(3)]

The terminal owner or operator shall notify the owner or operator of each nonvapor-tight gasoline tank truck loaded at the affected facility within 3 weeks after the loading has occurred. [40 CFR 60.502(e)(4)]

The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained. [40 CFR 60.502(e)(5)]

Alternate procedures to those described in 40 CFR 60.502(e)(1) through (5) of this section for limiting gasoline tank truck loadings may be used upon application to, and approval by, the Administrator. [40 CFR 60.502(e)(6)]

5.1.4(d) Testing

A vapor-tight gasoline tank truck is defined as a gasoline tank truck that has demonstrated within the 12 preceding months that its product delivery tank will sustain a pressure change of not more than 750 pascals (75 mm water) within 5 minutes after it is pressurized to 4500 pascals (450 mm water). This capability is to be demonstrated using the pressure test procedure specified in Reference Method 27. [40 CFR 60.501]

The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. [40 CFR 60.505(b)]

In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods as specified in 40 CFR Part 60 Subpart XX, except as provided in 40 CFR 60.8(b). The three-run requirement of 40 CFR 60.8(f) does not apply. [40 CFR 60.503(a)]

5.1.4(e) Recordkeeping

The owner or operator will require that the tank identification number be recorded as each gasoline tank truck is loaded at the affected facility. [40 CFR 60.502(e)(2)]

The tank truck vapor tightness documentation required under 40 CFR 60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection. [40 CFR 60.505(a)]

The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information: 1) Test title: Gasoline Delivery Tank Pressure Test -- EPA Reference Method 27; 2) Tank owner and address; 3) Tank identification number; 4)Testing location; 5) Date of test; 6) Tester name and signature; 7) Witnessing inspector, if any: Name, signature, and affiliation; 8) Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs). [40 CFR 60.505(b)]

40 CFR 60.505(d) requires that the terminal owner or operator shall keep documentation of all notification required under 40 CFR 60.502(e)(4) on file for at least 2 years. However, as per IDAPA 58.01.01.322.07(a) and 40 CFR 70.6(a)(3)(ii)(B), the facility wide conditions of the permit contain a provision which requires these records to be maintained for a minimum of five years.

5.1.4(f) Reporting

The Permittee must submit certified semiannual reports of all required monitoring listed above in Section 5.1.4(c). Deviations are to be noted by the permittee and the corrective action(s) taken must be included in the semiannual report. Refer to the General Provisions at the end of the Tier I Operating Permit.

5.1.5 Permit Requirement - Vapor Collection System Pressure Limits [40 CFR 60.502(h) and (l)]

5.1.5(a) Applicability

The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm

of water) during product loading. This level is not to be exceeded when measured by the procedures specified in 60.503(d). [40 CFR 60.502(h)]

No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4500 pascals (450 mm of water). [40 CFR 60.502(i)]

5.1.5(b) Compliance Demonstration Method

Compliance with this standard shall be demonstrated by completing the monitoring, testing, recordkeeping, and reporting requirements stated in 5.1.5(c), (d), and (e) of this memorandum.

5.1.5(c) Monitoring and Testing

Pursuant to 40 CFR 60.503(a), in conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in this section, except as provided in §60.8(b). The three-run requirement of §60.8(f) does not apply to this Subpart (40 CFR, Part 60, Subpart XX).

Pursuant to 40 CFR 60.503(b), immediately before the performance test required to determine compliance with §60.502(b) and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.

The owner or operator shall determine compliance with the standards in §60.502(h) by performing the testing specified in §60.503(d).

5.1.5(d) Recordkeeping

As per IDAPA 58.01.01.322.07(a) and 40 CFR 70.6(a)(3)(ii)(B), the facility wide conditions of the permit contain a provision which requires records to be maintained for a minimum of five years.

5.1.5(e) Reporting

The Permittee must submit certified semi-annual reports of all required monitoring listed above in Section 5.1.5(c). Deviations are to be noted by the permittee and the corrective action(s) taken must be included in the semiannual report. Refer to the General Provisions at the end of the Tier I Operating Permit.

5.2 Emission Unit - CPL On-Site Vapor Extraction System

5.2.1 Emission Unit Description

A Vapor Extraction System (VES) is installed on-site at CPL to remove hydrocarbons from under the plant site. The VES has two blowers that can deliver up to 1000 scfm of hydrocarbon contaminated air to the intake of a vapor incinerator for flaring. The incinerator is supplemented with natural gas and/or ambient air as needed, in order to regulate the operating temperature and achieve optimal operating efficiency. Emissions from the VES consist of volatile organic compounds (VOCs) from extracted vapors that are not incinerated (control efficiency is 95%), and pollutants of combustion generated from the incineration process.

5.2.2 Permit Requirements - Visible Emissions Standard - [IDAPA 58.01.01.625 (4-23-99)]

5.2.2(a) Applicability

The VES thermal oxidizing flare is subject to the visible emissions standard in accordance with IDAPA 58.01.01.625. Information and calculations presented in the permit application confirm that this control device is a nonsmoking thermal oxidizing flare. AP-42 industrial flare emission factor information indicates soot concentrations from this type device are negligible. It does not appear that combustion of natural gas and recovered fuel vapors in this particular device will cause a violation of the visible emissions standard. Therefore, compliance with the visible emissions standard will be demonstrated by requiring the exclusive use of natural gas and/or recovered fuel vapors in the thermal oxidizer and by including this source in the required quarterly facility-wide inspections of all potential sources (see permit condition A.8). Note that upon review of this particular control device, it has now been determined that the VES thermal oxidizing flare is not subject to the incinerator rules in accordance with IDAPA 16.01.1501-1502 (58.01.01.785). This particular control device does not burn "refuse," therefore, the incinerator rules given by IDAPA 58.01.01.785-787 do not apply.

5.2.3 Permit Requirement - Hourly and Annual Emission Rate Limits for Benzene, PM-10, NO_x, CO, VOC, and SO2 [PTC # 0020-0026]

5.2.3(a) Applicability

Per PTC # 0020-0026 (8-28-90), the hourly and annual emissions from the Vapor Extraction System (VES) thermal oxidizer stack shall not exceed the following values:

SOURCE DESCRIPTION	Benzene		PM-10		NOx		CO		VOC		SO2	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
VES Thermal Oxidizer Stack	0.054	0.24	0.012	0.053	1.2	5.3	0.74	3.2	5.7	25	0.0015	0.0064

5.2.3(b) Compliance Demonstration Method

Compliance with this standard shall be demonstrated by completing the monitoring, testing, recordkeeping, and reporting requirements stated in 5.2.3(c), (d), (e), and (f) of this memorandum.

5.2.3(c) Monitoring

The Tier I OP will incorporate the existing monitoring and recordkeeping requirements from the PTC. Per Appendix A of PTC # 0020-0026 (8-28-90), pound per hour Vapor Extraction System thermal oxidizer stack emissions of benzene, PM-10, NO_x, CO, VOC, and SO_2 shall be determined by a pollutant specific EPA reference method, or Department proved alternative, or as determined by the Department's emission estimation methods used in the PTC analysis. Annual Vapor Extraction System thermal oxidizer stack emissions of benzene, PM-10, NO_x, CO, VOC, and SO_2 shall be determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the system may operate.

5.2.3(d) Testing

Per PTC # 0020-0026 (8-28-90), the Permittee will comply with the following conditions (during times when the VES system is operated) unless the Department has approved a request from the Permittee to stop these monitoring requirements:

> At least once per day, the permittee shall measure and record the lower explosion limit (LED) and volumetric flowrate of the in fluent to the vapor incinerator. Based on these data, the permittee shall calculate and record

the quantity of hydrocarbons supplied to the vapor incinerator from the bioventing system for that particular day.
The permittee shall collect sets of samples and conduct gas-chromatographic analyses of the samples subject to the following conditions:

During each calendar quarter the system is operated, a set of samples are required to be collected no later than ten (10) days after January 1, April 1, July 1, and October1. The dates renew each year throughout the project life unless the Department approves a request to discontinue this monitoring requirement.
Each sample set shall consist of two vapor incinerator in fluent samples and two vapor incinerator effluent samples. For each in fluent sample collected a corresponding effluent sample shall be collected simultaneously or as soon as is practically feasible.

5.2.3(e) Recordkeeping

Per PTC # 0020-0026 (8-28-90), the following information and data shall be recorded for each sample under normal operating conditions (unless the Department has approved a request from the Permittee to discontinue these monitoring requirements). The recorded process data shall be those that are in effect while the particular sample is being collected. Pump and flow element equipment numbers are those identified in the applicant's submittal.

Identify the location (in fluent or effluent) within the process from which the sample is collected.

The date and precise time of each sample collection.

The volumetric flowrate (scfm) from the bioventing wells as determined using flow element 201.

The volumetric flowrate (scfm) in the P-101 pump suction line downstream of the dilution air inlet, as determined using flow element 244.

The volumetric flowrate (scfm) in the P-100 pump suction line downstream of the dilution air inlet, as determined using flow element 214.

The vapor incinerator operating temperature.

The daily recordings of the vapor incinerator in fluent lower explosion limit and volumetric flowrate, as required in condition C.13.1 of this permit, shall be kept on-site. This requirement does not apply if the Department has approved a request from the Permittee to discontinue these monitoring requirements as specified in condition C.13. Access to these records shall be granted to Department representatives upon request.

Monitoring records and supporting information shall be retained for at least five (5) years from the date of monitoring, sample measurement, report, or application, in accordance with IDAPA 58.01.01.322.07(c) (5/1/94).

5.2.3(f) Reporting

Per PTC # 0020-0026 (8-28-90), the results of the sample collection and subsequent gas chromatographic analyses required in condition C.13.2 of the permit shall be reported to the Department within thirty (30) days of the date on which the samples were collected. This requirement does not apply if the Department has approved a request from the Permittee to discontinue these monitoring requirements as specified in condition C.13. The submitted results shall contain the following information clearly labeled for each sample:

The sampling port location (in fluent or effluent) within the process from which the sample was collected.

The date and precise time of each sample collection.

The volumetric flowrate (scfm) from the bioventing wells at the time of sample collection as determined using flow element 201.
The volumetric flowrate (scfm) in the pump P-101 suction line downstream of the dilution air inlet at the time of sample collection, as determined using flow element 244.

The volumetric flowrate (scfm) in the pump P-100 suction line downstream of the dilution air inlet at the time of sample collection, as determined using flow element 214.

The vapor incinerator operating temperature at the time of sample collection.

The gas chromatographic analysis output shall include at a minimum the following information:

Sample composition, average sample molecular weight, and net heating value of the sample.

Composition of the hydrocarbon fraction within the sample and the corresponding average molecular weight.

The mole fraction of benzene in the hydrocarbon fraction of the sample. If the benzene mole fraction is below the detection limit of the analytical equipment, indicate so and report the detection limit.

The Permittee must submit certified semiannual reports of all required monitoring listed above in Section 5.2.3. (c). Deviations are to be noted by the permittee and the corrective action(s) taken must be included in the semiannual report. Refer to the General Provisions at the end of the Tier I Operating Permit.

5.2.4 Permit Requirement - Operating Requirements [PTC # 0020-0026]

5.2.4(a) Applicability

As per PTC # 0020-0026 (8-28-90), the bioventing well and blower system shall not be operated so as to bypass or otherwise circumvent the vapor incinerator without prior Department approval. In addition, the Permittee must comply with the following conditions, unless the Department has approved the Permittee's request to bypass or otherwise circumvent the vapor incinerator:

The vapor incinerator shall be operated within the temperature range of 1200°F to 2000°F whenever bioventing well vapors are supplied to the incinerator. The temperature controller set point shall be 1600°F.

The vapor incinerator pilot burner shall operate whenever bioventing well vapors are supplied to the incinerator.

The vapor incinerator effluent volumetric flowrate shall be at least 344 scfm and shall not exceed 1122 scfm whenever bioventing well vapors are supplied to the incinerator as stated in the applicants submittal.

The vapor incinerator in fluent stream shall contain a maximum of one percent (1%)

hydrocarbons on a volume basis.

The permittee shall install, calibrate, maintain and operate a system to automatically shut off the bioventing feed line to the vapor incinerator in the event of a pilot burner failure.

The permittee shall install, calibrate, maintain and operate a system to automatically shut off the bioventing feed line to the vapor incinerator whenever the vapor incinerator operating temperature is below 1200°F.

5.2.4(b) Compliance Demonstration Method

Periodic monitoring of operating requirements such as approval to discontinue operation of the thermal oxidizer, initialization of a temperature set point, continuous operation of the pilot burner, and installation and operation of automatic cutoffs are not practical. However, the monitoring, recordkeeping and recording requirements specified in sections 5.2.3(c), (d), (e) and (f) also apply to these requirements as well as all of the other requirements in section 5.2.4(a) of this memorandum as a means of demonstrating ongoing compliance.

5.2.4(c) Monitoring

The Tier I OP will incorporate the existing monitoring requirements from PTC # 0020-0026 (8-28-90). The monitoring requirements specified in sections 5.2.3(c) and (d) also apply to the requirements in section 5.2.4(a) of this memorandum.

5.2.4(d) Recordkeeping and Reporting

The Tier I OP will incorporate the existing recordkeeping and reporting requirements from PTC # 0020-0026 (8-28-90). The recordkeeping and reporting requirements specified in sections 5.2.3(e) and (f) also apply to the requirements in section 5.2.4(a) of this memorandum.

5.3 Emission Unit - NWTC Petroleum Product Storage Tank A201

5.3.1 Emission Unit Description

Tank A201 is an above ground, fixed roof, fuel additive tank operated by NWTC. The tank capacity is 14,700 gallons (56 m^3) and it was installed in 1994. A description of the additive tanks is provided in Section 4.1 of this memorandum, and detailed information about tank A201 is provided on pages 2-80, 2-81, 3-16, and 3-17 of the Tier I permit application.

5.3.2 Permit Requirement - New Source Performance Standards - Subpart Kb, Storage Vessels for Volatile Organic Liquid Storage Vessels, Including Petroleum Liquids [40 CFR Part 60, Subpart Kb]

5.3.2(a) Applicability

40 CFR 60.110b(a) states that except as provided in 40 CFR 60.110b(b), the affected facility to which this Subpart applies is each storage vessel with a capacity greater than or equal to 40 m^3 that is used to store volatile organic liquids (VOLs) for which construction, reconstruction, or modification commenced after July 23, 1984. On this basis, it is apparent that tank A201 is an affected facility with regard to Subpart Kb.

40 CFR 60.110b(b) states that except as specified in 40 CFR 60.116b(a) and (b), storage vessels with a design capacity less than 75 m^3 are exempt from the General Provisions of Part 60, Subpart A and the provisions of Subpart Kb.

However, 40 CFR 60.116b(b) requires that the owner or operator shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 m^3 is subject to no provision of this Subpart other than those required by this paragraph. However, note that 40 CFR 60.116b(a) requires that the record required by 40 CFR 60.116b(b) shall be kept for the life of the source.

5.3.2(b) Compliance Demonstration Method

Compliance with this standard shall be demonstrated by completing the recordkeeping requirements stated in 5.3.2(c) of this memorandum.

5.3.2(c) Recordkeeping

As noted above, because of the capacity of this tank is less than 75 m^3 , the only requirements from 40 CFR Part 60, Subpart Kb, which apply to tank A201 are recordkeeping requirements. These requirements are specified in Section 5.3.2(a) above.

5.4 Emission Unit - Norwood Street Vapor Extraction System

5.4.1 Emission Unit Description

A Vapor Extraction System (VES) is installed on Norwood Street near the CPL and NWTC Boise Terminal to remove hydrocarbons originating from the plant site. Hydrocarbon contaminated air is routed to the intake of a vapor incinerator for flaring. The incinerator is supplemented with natural gas and/or ambient air as needed, in order to regulate the operating temperature and achieve optimal operating efficiency. Emissions from the VES consist of volatile organic compounds (VOCs) from extracted vapors that are not incinerated and pollutants of combustion generated from the incineration process.

5.4.2 Permit Requirements - Visible Emissions Standard - [IDAPA 58.01.01.625 (4-23-99)]

5.4.2(a) Applicability

The VES thermal oxidizing flare is subject to the visible emissions standard in accordance with IDAPA 58.01.01.625. Note that although the PTC refers to the rule in effect at the time, "Section 1-1201, Visible Emissions Rules and Regulations for the Control of Air Pollution In Idaho," the two rules are essentially equivalent, therefore the current rule is cited in the Tier I permit. Information in the PTC application indicates this control device is a nonsmoking thermal oxidizing flare. AP-42 industrial flare emission factor information indicates soot concentrations from this type device are negligible. It does not appear that combustion of natural gas and recovered fuel vapors in this particular device will cause a violation of the visible emissions standard. Therefore, compliance with the visible emissions standard will be demonstrated by requiring the exclusive use of natural gas and/or recovered fuel vapors in the thermal oxidizer and by including this source in the required quarterly facility-wide inspections of all potential sources (see permit condition A.8). The VES thermal oxidizing flare is not subject to the incinerator rules in accordance with IDAPA 16.01.1501-1502 (58.01.01.785). This particular control device does not burn "refuse," therefore, the incinerator rules given by IDAPA 58.01.01.785-787 do not apply.

6. INSIGNIFICANT ACTIVITIES

The following activities/sources have been declared conditionally exempt based upon size, production rate, or potential to emit regulated air pollutants:

Emissions Unit or Activity	Description	Insignificant Activities IDAPA Citation Section 58.01.01.317.01(a)(i)
Storage of pressurized oxygen, nitrogen, carbon dioxide, or inert gases	Routine storage of pressurized gases while not in use	(5) [3-3-95]
Internal combustion engines	Vehicle use on site	(10) [3-3-95]
Barbecues	On site use	(11) [3-3-95]
Brazing, soldering, welding and cutting	Routine operational and maintenance activities	(12) [3-23-98]
Plastic pipe welding	Occasional need for installation or upgrade of plastic piping	(26) [3-3-95]
Site upkeep and maintenance	Plant maintenance	(28 [3-23-98]
Maintenance of paved areas	Routine maintenance of paved areas	(30) [3-23-98]
General vehicle maintenance	Routine maintenance	(40) [3-23-98]
Steam cleaning	Routine cleaning of parts and equipment	(34) [3-3-95]
Air cooling systems	Indoor air cooling	(41) [3-3-95]
Air vents for bathroom facilities	Room venting	(43) [3-3-95]
Office activities	Office activities	(44) [3-3-95]
Lab analysis and testing	Routine fuels analysis. Product samples are collected for product quality control purposes. They are either sent to a lab or stored in a cabinet for a month. Stored samples are analyzed only if there is a problem reported with the product, otherwise, they are discharged to the oil/water separator.	(45) and (63) [3-23-98]
Fire suppression	Possible use of fire suppression equipment	(46) [3-23-98]
RCRA waste storage areas	Routine storage of RCRA regulated wastes, (satellite and temporary accumulation areas)	(48) [3-23-98]
Metal work	Routine cutting, grinding, blasting, buffing of pipe	(49) [3-23-98]
Construction activities	Temporary construction activities at a facility provided that the installation or modification of emissions units must comply with all applicable federal, state, and local rules and regulations	(53) [3-23-98]
Shop activities. Repair and maintenance activities	Some repair and maintenance of equipment takes place within the facility shop. Also, routine repair and maintenance activities that do not potential emissions	(64), [3-23-98]
Hydro testing equipment	Hydro testing of piping and tanks	(66) [3-3-95]
Solid waste containers	Waste storage	(69) [3-3-95]
Sludge handling	Sludge generated during pigging operations and tank cleanings	(100) [3-23-98]
Pond dredging	Potential exists to clean the onsite evaporation pond	(102) [3-3-95]
Non-PCB containing electrical equipment	Some transformers and other equipment contain non-PCB oil	(104) [3-3-95]

Emissions Unit or Activity	Description	Insignificant Activities IDAPA Citation Section 58.01.01.317.01(b)(I)
Welding	The majority of welding is performed in the maintenance shop or outside, uncontrolled. Maximum estimated usage of 0.4 tons/day at CPL and 0.4 tons/day at NWTC	317.01(b)(I)(9) [3-3-95]
Water and space heaters	Space heaters and water heaters using natural gas, propane or kerosene and generating less than five million Btu/hr	317.01(b)(I)(18) [3-3-95]

There are no applicable requirements for these insignificant activities. Therefore, no specific permit terms or conditions exist in the permit for these sources/activities. They are listed in the permit to gain permit shield protection.

Safety relief valves were listed in the application as being categorically exempt under IDAPA 58.01.01.317.01(a)(I)(86). However, they were not included in the list of insignificant activities. This rule refers to "Clean condensate tanks." The application describes these valves as follows: "Safety release valves on terminal pipeline and facility piping are considered insignificant (however, they were counted as part of the valve fugitive emissions)." Product safety relief valves such as these may best be addressed by the facility wide conditions in section A of the Tier I permit which address excess emissions in the event of upset, breakdown, or the initiation of safety measures (IDAPA 58.01.01.130-136).

7. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATIONS

The permittee is required to submit a periodic compliance certification to the appropriate DEQ regional office (Boise Regional Office in this case) and the EPA Region 10 for all emission units at the facility. This is required by IDAPA 58.01.01.322.11 to certify whether compliance was achieved during the reporting period--which will be annually for the CPL and NWTC Boise facility, unless an applicable requirement is identified that will require submittal of compliance certifications more frequently.

No compliance plan was submitted with the Tier I OP application, as the permittee has certified that they are in compliance with all applicable requirements.

8. REGISTRATION FEES

IDAPA 58.01.01.525 requirements for registration of pollutants and registration fees apply because the facility is a *major facility* as defined by IDAPA 58.01.01.008.10 for the emissions of volatile organic compounds (VOCs) in excess of 100 T/yr. Registration of pollutants and payment of registration fees are determined by the current regulation for applicability and calculation of fees. Fees regulations are subject to changes through rule making. The facility currently has the option of paying registration fees according to one or more of the following (rule making effective March 19, 1999):

1) Actual annual emissions;

2) Estimated actual annual emissions based on actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year; and/or,

3) Allowable emissions based on permit locations.

9. AIRS FACILITY SUBCLASSIFICATION

No changes to the EPA's AIRS databases are necessary as a result of this permit action.

10. RECOMMENDATION

Based on the Tier I OP application, consideration of comments received, and review of the federal regulations and state rules, staff recommends that DEQ issue Tier I Operating Permit No. 001-00026 to the Chevron Pipeline Company and Northwest Terminalling Company for the Boise Terminal.

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cc: Boise Regional Office
DEQ State Office